

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : Mark Darrell Varvel

SERIAL NO. : 10/670,259

FILED : 9/26/2003

TITLE : In-Situ Containment and Extraction of Volatile Soil Contaminants

EXAMINER : N/A

GROUP : 3672

DOE NO. : S-98,065

Customer No. : 31970

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INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §§ 1.56 AND 1.97



31970

PATENT TRADEMARK OFFICE

Commissioner of Patents and Trademark  
Washington, D.C. 20231

Sir:

The citations listed below, which may be material to the examination of the subject application, are submitted in compliance with the duty of disclosure defined in 37 CFR § 1.56 and § 1.97. The Examiner is requested to make these citations of official record in this application.

The following U.S. Patents disclose related subject matter to the field of invention of the present invention:

1. U.S. Patent No. 5,893,680 issued to Lowry et al., on Apr. 13, 1999, discloses a soil remediation system which uses naturally occurring barometric pressure oscillations *within* the contaminated zone to enhance remediation.
2. U.S. Patent No. 4,730,672 issued to Payne, on Mar. 15, 1988, discloses a

method and apparatus of collecting volatile contaminants from the vadose layer of earth.

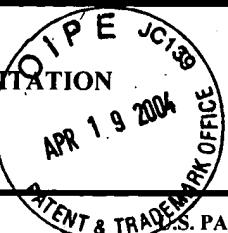
3. U.S. Patent No. 5,160,217 issued to Metzer et al., on Nov. 3, 1992, discloses a method for removing volatile contaminants from a layer of contaminant lying on the top of a water table.
4. U.S. Patent No. 6,109,358 issued to McPhee et al., on Aug. 29, 2000, discloses an apparatus and method for accumulating and discharging a gas under pressure or vacuum to aid the remediation of a contaminated porous medium, such as soil.
5. U.S. Patent No. 5,791,825 issued to Gardner et al., on Aug. 11, 1998, discloses an apparatus for building a horizontal underground barrier by cutting through soil and depositing a slurry.

This Disclosure Submission Statement Under 37 CFR § 1.56 and § 1.97 is not to be construed as a representation that a search has been made, that additional matter material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art under 35 U.S.C. 102.

Respectfully submitted,

  
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Date: March 4, 2004

<b>INFORMATION DISCLOSURE CITATION</b> <i>(Use several sheets if necessary)</i>			Docket Number (Optional) <b>S-98,065</b>		Application Number		
			Applicant(s) <b>Mark Darrell Varvel</b>				
			Filing Date <b>U.S. PATENT DOCUMENTS</b>				
			Group Art Unit				
<b>U.S. PATENT DOCUMENTS</b>							
*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		<b>5,893,680</b>	<b>4/13/99</b>	<b>Lowry, et al.</b>			
		<b>4,730,672</b>	<b>3/15/88</b>	<b>Payne</b>			
		<b>5,160,217</b>	<b>11/3/92</b>	<b>Metzer, et al.</b>			
		<b>6,109,358</b>	<b>8/29/00</b>	<b>McPhee, et al.</b>			
		<b>5,791,825</b>	<b>8/11/98</b>	<b>Garder, et al.</b>			
<b>FOREIGN PATENT DOCUMENTS</b>							
REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
<b>OTHER DOCUMENTS</b> <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>							
<b>EXAMINER</b>				<b>DATE CONSIDERED</b>			
<b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							